THE EXTENSION HORTICULTURIST

August 1, 1923.

Upon the request of a number of our readers we are beginning in this issue the listing of all publications dealing with fruit, vegetable and landscape extension work. In order to make this service effective, it will be necessary for us to have the full cooperation of everyone connected with the horticultural extension work. Special attention is called to the list as contained in this number.

What is your experience in the use of checks or controls in conducting your demonstrations and how do you analyze the problem?

Beginning July 1, 1923, the name States Relations Service was discontinued and Office of Cooperative Extension Work was adopted in its stead. This office is now a part of the Secretary's Office.

Office of Horticultural and Pomological Investigations
and States Relations Service Cooperating,
U. S. Department of Agriculture,
Washington, D. C.

Analyzing the Problem.

One of the most difficult and important angles of extension work is to properly analyze the situation that is to be dealt with. The individual is often entirely mistaken in his determination of the factors that influence his success or failure in the growing of any crop or group of crops and neglects to take into consideration the complications and indirect influences. If it is a problem of disease control the remedy may lie largely in crop rotation, especially as regards the relationship of one crop to another in the rotation. Very pronounced cases of disease injury that have failed to respond to spraying are frequently due to weather conditions or some factor such as untimely cultivation or lack of proper plant food at a critical time in the growth of the crop. These are local factors that are hard to determine in advance or control and the specialist is called upon to analyze conditions with a view to either applying a prompt remedy or avoiding the same condition another year.

It is an old saying that "Do right a thousand times and you will never hear of it but do wrong once and you will hear of it a thousand times." It would seem to many of us that this literally true and that where we make a mistake once in the conduct of a demonstration we hear of it ever afterward. It is all right to go upon the theory that we as extension specialists are teaching only proven principles and practices, but who knows when these principles and practices that we are teaching are absolutely proven, . We are called upon almost every day to give advice upon cases that are out of the ordinary, and which require the careful consideration of many local factors and complications. The only thing that can be done in such cases is to stick as close as possible to an accredited practice and be perfectly frank with our clientele in giving them to understand that we are applying the best known treatment.

In some demonstrations visited recently it has been apparent that the treated portion of the crop was entirely too small to be convincing. If we are working on the theory, for example, that the spraying of tomatoes with Bordeaux misture will give certain results in the control of diseases then why confine our demonstration to one or two rows through the field, but rather arrange to have at least one-half or three-fourths of the field treated, thus giving the grower a multiplied viewpoint of the results. In one fertilizer demonstration on tomatoes where only a small number of check rows were left without fertilizer, the grower in making his report wrote in the space provided for the record on the check rows "No good, crop so poor it was scarcely worth harvesting." Had this demonstration been reversed and the greater portion of the field planted without fertilizer the grower would not have had such a magnified opinion of the value of the fertilizer. Numerous cases might be cited bearing out the value of having the demonstration on a large enough scale to outweigh the check and make the results show up in larger proportion in the mind of the grower. There is a psychological effect in this, the value of which is lost where the portion covered by the demonstration is too small. On the other hand, we are finding many cases especially in orchard work where the cooperator objects to leaving any portion as a check. This in many ways is just as objectionable as the above and is more difficult to handle. We would like the observations of state specialists along this line.

Field Trip of Prof. C. P. Close.

Ohio.

Messrs. Cruickshank and Beach were at Wooster, Ohio, attending a three days conference of the Farm Bureau representatives and extension workers so none of the demonstration orchards were visited on this trip. The principal activities in fruit and landscape work in Ohio are listed under four heads: Orchard Management, Home Orchard Spraying, Fruit Marketing, and Rural Home Beautification.

In orchard management, 96 demonstrations were given in 28 counties covering spraying, pruning, fertilizing and rejuvenation of old orchards. Home orchard spraying work is carried on in 9 counties and 74 demonstrations were given. The fruit marketing work is being done in 6 counties. This project was started last year and proved to be very successful in the grading, packing and marketing of peaches and apples. In the rural home beautification work, 41 demonstrations are under way in 16 counties. The goal in this project is to have 100 home grounds improved this year as a result of these demonstrations.

Indiana.

Mr. C. L. Burkholder was away on vacation and as his office records of the current year's work could not be found, a brief mention of his activities cannot be given more than to say that there are 6 spray rings, including a total of 80 members in Clinton County. These spray rings cooperated in buying 78 barrels of lime sulphur, 950 pounds of arsenate of lead, 135 pints of nicotine sulphate and 8,750 pounds of nitrate of soda. It is the intention of these spray rings to sell their fruit cooperatively if they have a surplus for sale. Mr. Burkholder was able to induce 150 people in 6 counties to plant strawberries this spring for home use. The average number of plants used by each family was 200. In the landscape work 28 planting demonstrations were made at the farm homes, schools, etc.

Mr. Gaylord is giving full time to potato work and is meeting with splendid success. He has about 700 boys and girls in potato club work, 300 of which are using certified seed furnished by the B. & O. Railroad Company. This company furnished 40 bushels of seed potatoes in each of the 23 counties through which its tracks run for this club work. Each boy or girl was given 4 bushels to plant. The company has also given $25.00 to be used for premiums in potato exhibits in each county, and a special $100.00 prize for the club member growing the best crop, the money to be used as a scholarship at Purdue University, or on a trip to Washington, D. C. Each club member is to exhibit one peck of potatoes at the Purdue Potato Show and a peck at his county fair. In the general potato demonstration work every county has demonstration plots.

Michigan.

A trip was made to northern Michigan with Fruit Specialist H. A. Cardinell to see demonstrations in orchard spraying and fertilizing in Benzie and Grand Traverse Counties. In 18 counties last spring, Mr. Cardinell conducted 36 two-day schools on top grafting primarily, but including pruning and spraying secondary. One important line of work in Michigan is to graft non-commer-

cial varieties of apples to the standard commercial list. The orchard fertilizer work has increased somewhat this year. The pruning and spraying work have been increased also.

Wisconsin.

The field meeting of the Great Plains Section of the American Society for Horticultural Science was held in Wisconsin beginning July 10, about 35 members being present from the Great Plains states and Canada. During the first day a trip was made to the cranberry bogs in the vicinity of Wisconsin Rapids. There are several hundred acres of cranberries in this section, some of which have been in fruiting 45 years and are still in good condition.

Near Oshkosh a visit was made to the orchard where Prof. Roberts is still continuing his pruning work on Wealthy apple trees. A field discussion of this work was given by Prof. Roberts in the orchard, using certain trees to show the results obtained.

The trip was continued north to Sturgeon Bay, several stops being made on the road at orchards in the spray ring work, and at the landscape plantings of Herman Idhe which is now in its fourth year. The method of conducting this landscape demonstration was explained by Prof. Aust and proved to be one of the most interesting places visited.

The Sturgeon Bay section of Door County is the principal sour cherry district of Wisconsin. A good many of the orchards were visited, several being those in which Prof. Roberts has carried on experimental and demonstration work in cherry tree pruning. This pruning work has been of immense value to the sour cherry industry and is one of the most valuable pieces of demonstration work in the country, and, coupled with spraying, it has meant doubling the length of life of sour cherry trees, keeping them in better health and vigor, practically assuring annual crops unless extremely severe winters prevail, and putting the sour cherry industry in first class productive condition. There are 5,000 acres of sour cherries in Door County, the largest orchard containing 700 acres. Most, if not all of the cherry men, have adopted the Roberts system of pruning.

On account of illness Mr. F. R. Gifford could not continue the fruit demonstration work this year so Mr. C. L. Kuehner was appointed to begin service on February 1. He has been pushing the pruning, spraying, bridge grafting and spray ring work. Sixty-two pruning demonstrations were given last spring. Besides directing the spraying in the demonstration orchards, Mr. Kuehner also directs the spraying in 11 spray rings of 82 orchards in four counties. He thus supervises the spraying of about 8,000 fruit trees. There are about 41 spray rings in Wisconsin, these are in 16 counties. Cost accounts are kept of all operations in the demonstration orchards. Later in the season county fair exhibits will be made and a few grading and packing demonstrations given.

Annual Field Day - Massachusetts.

Prof. H. F. Tompson of Massachusetts announces that the annual field day will be held at the Market Garden Field Station, Reed Street, Lexington, Massachusetts on Wednesday, August 8, 1923. The summer meeting of the Massa-

chusetts State Vegetable Growers Association, will be held at the same place and date at 4:00 P. M. The annual field meeting at the Field Station is an all day affair and one that is full of interest for vegetable growers and extension workers. The writer has had the pleasure of attending a number of these annual field meetings at the Lexington Station and considers them of great value as a means of spreading results. The program of demonstrations on August 8th includes: The home mixing of fertilizers, The fertilization of cucumber blossoms for seed production, Spraying and dusting for insect and disease control and Vegetable tying machinery. There will also be on exhibition the results of experiments and tests of asparagus varieties and the effect of the size of the roots of asparagus on future production, Carrot blight control, Work with green house tomatoes and cucumbers, Manure economy tests, Seed production and variety tests. There will also be exhibits of new tillage tools and seed drills. It is urged that every vegetable specialist and county agent of nearby states in whose territory there are large vegetable interests, avail themselves of this opportunity to meet with representative growers and to witness the demonstrations.

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Vegetable Growers Association of America.

The annual meeting of the Vegetable Growers Association of America will be held at the New Statler Hotel, Buffalo, New York, September 17 to 20. This organization, which is composed primarily of green house and out door vegetable growers, is National in its scope, in fact, it is the only nation-wide organization of vegetable growers in the country. Prof. H. F. Tompson, President, and Mr. C. H. Nissley, Secretary, aided by the local New York people, under the direction of Mr. H. C. Thompson of Ithaca, are doing everything in their power to make the Buffalo meeting one of the best in the history of the association. The exhibits, both of labor saving machinery and implements, also those of vegetables will be well worth seeing. Wednesday the program is to be given over to a field trip during which numerous demonstrations of equipment will be conducted. Why not plan now to attend the Vegetable Growers Convention at Buffalo during the week of September 17.

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Fruit, Vegetable and Landscape Extension Literature.

A request has been received from some of the extension men for us to list the fruit, vegetable and landscape extension publications as they appear and we are certainly glad to do this. We will now ask all of our readers to send us as soon as published, two copies of their fruit, vegetable and landscape literature, together with a litter stating that certain publications are being forwarded. We will list each month in the "Extension Horticulturist" all bulletins received since the last issue.

To get the matter under way we will include in this number all horticultural extension bulletins received since January 1, 1923, by the States Relations Service (now Office of Cooperative Extension Work) up to July 1, 1923.

Alabama Ploytechnic Institute.
Mexican bean beetle control - Cir. 61 (May 1923.)

Arizona University.
Potatoes, the million dollar industry, how they grow and how to use them - Cir. 44 (Jan. 1923.)

Connecticut Agricultural College.
The home garden - Bul. 58 (Feb. 1923)
Demonstration orchards - Bul. 63 (April 1923)
Growing small fruits for the home garden - Bul. 62 (Feb. 1923)
Spraying 1923 for apples, pears, peaches, cherries, plums, quinces, grapes and small fruits - Bul. 61 (March 1923.)

Florida University.
Irish potatoes in Florida - Bul. 36 (June 1923)

Georgia State College of Agriculture.
Pimento growing for club members - Bul. 23 (Feb. 1923)

Indiana - Purdue University.
More and better potatoes - Bul. 89 (Feb. 1923)

Iowa State College.
The shelterbelt as an asset on the Iowa farm - Bul. 108 (Sept.1922)
Raspberries - Bul. 76 (March 1923)

Kansas State Agricultural College.
Landscaping the home grounds with native materials - X - Form 199 (March 1923)

Kentucky University.
Team demonstration outlines III, junior agricultural clubs - 6. selection and treatment of Irish potatoes for seed - Cir. 142 (Jan. 1923)

Louisiana State University.
Lessons for members of the boys and girls garden clubs, first and second year - Cir. 61 (Nov. 1922)
Rose diseases in Louisiana - Cir. 63 (April 1923)

Maine University.
Spraying and dusting schedule for Maine apple orchards - Cir. 83 (April 1923)
Starting an orchard: Insect and disease control - Cir. 82 (March 1923)

Maryland University.
More tomatoes from fewer acres - Bul. 27. (Feb. 1923)

Massachusetts Agricultural College.
Hotbeds and coldframes - Leaflet 60 (March 1923)
Spraying the apple orchard - Leaflet 68 (Feb. 1923)
Cranberry growing in Massachusetts - Leaflet 72 (March 1923)
The farm home garden - Leaflet 59 (April 1923)

Massachusetts Agricultural College - Cont'd.

Selling manufactured horticultural products - Leaflet 69.
The vegetable gardener's bookshelf - Library Leaflet 47 (March 1923)
Monthly report of extension work for market gardeners - Nos. 58, 59, 60 (Jan., Feb., March, April, 1923)
The garden primer: part II. How to grow raspberries - Jr. Ext. Ser. 16 (May 1922)
Monthly report of extension work for market gardeners - No. 57 (Dec. 1922)

Minnesota University.

The home orchard spray calendar - Cir. 9 (Feb. 1923)
The home vegetable garden - Bul. 69 (Feb. 1923)

Mississippi A. & M. College.

Twelve lessons in sweet potato culture for Mississippi sweet potato club members - No. 20 (Nov. 1922)

Missouri University.

Cluster-bud spray for apples, making and applying - Cir. 125 (April 1923)
Growing field beans - Leaflet 19 (Feb. 1923)

New York - Cornell University.

Vegetable gardening for boys and girls - Jr. Bul. II (April 1923)
Strawberry culture in New York State - Bul. 16 (Jan. 1923)
Raspberries, blackberries and dewberries - Bul. 64 (April 1923)
Diseases, and insect and animal pests of the field bean in New York - Bul. 58 (Feb. 1923)

North Carolina State College of Agriculture.

Dusting of cabbage and collards to control worms - Cir. 135 (Jan. 1923)

Ohio State University.

About house plants - Bul. V. 18, No. 9.
Tomato growing - Bul. V. 18 No. 7.

Oklahoma A. & M. College.

The home acre orchard - Cir. 163.

Oregon Agricultural College.

The farm vegetable garden - Bul. 355 (Jan. 1923)
Orchard spray program for Oregon - Bul. 356 (Jan. 1923)
Seed Potato certification for 1923 - Bul 357 (Feb. 1923)

South Carolina - Winthrop College (Rock Hill, S. C.)

Girls gardening and canning club, one year program - Ser. 4, No. 6.

Tennessee University.

A spray program for apples and peaches - Pub. 113 (May 1923)
Control of insect enemies of melons, cucumbers and squash - Pub. 115 (March 1923)

Texas Agricultural College.

Watermelon culture in Texas - Cir. C-19 (March 1923)

Washington State College.

Plants for home beautification - No. 85 (Nov. 1922)
Control of apple scab, Venturea inaequalis - Bul. 99 (Feb. 1923)
Apple and Pear thinning for profit - Cir. 12 (May 1923)

West Virginia University.

Perennials and annuals - Home grounds - No. 4.

Wisconsin University.

Control of anthracnose on black raspberries - Cir. 159 (May 1923)
Spray home orchards - Cir. 158 (Jan. 1923)

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Recent callers in Washington.

Among those calling at the Washington office were Prof. G. S. Ralston, Extension Horticulturist, of the Virginia A. & M. College at Blacksburg, and Mr. F. A. Motz, Assistant Extension Horticulturist of the Virginia A. & M. College. Mr. Motz was doing demonstration work in nearby counties of Virginia and ran into Washington for a day. Since returning to Blacksburg, Mr. Motz has sent ua a collection of 12 pictures showing the scope of his strawberry demonstration work. Mr. Motz also sent us a group picture of the Piedmont Berry Growers' Association, the headquarters of which is at Scottsville, Virginia.

Another recent visitor in Washington was Prof. C. B. Sayre of Urbana, Illinois. Prof. Sayre has been spending what might be termed a vacation in visiting some of the leading horticultural sections in the east.

A few days ago we had the pleasure of a call from Prof. T. C. Johnson and family of Norfolk, Virginia, who were returning to Norfolk after a week or ten days of automobile travel through the valley section of Virginia, western Maryland and the Washington, D.C. section.

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Prof. Wm. Stuart, Potato Specialist of this office, has just returned from a trip which included parts of Connecticut, Rhode Island, Massachusetts, Vermont, Maine, Prince Edward Island and Nova Scotia. Prof. Stuart reports increased interest in potato seed certification in all sections. The Maine growers have increased their acreage of certified stock until there are now over 4,000 acres entered for certification. The general potato situation in Maine according to Prof. Stuart is not so good as estimated. At least 30% of the fields show poor stands, probably due in many cases to fertilizer injury.

W. R. Beattie, Extension Horticulturist.

C. P. Close, Extension Pomologist.